

Remarks

Claim 1 to 14 are pending. Claims 2, 3, 4, 6, 7, 13 and 14 are amended. Claims 1 to 4, 6 and 9 are in independent form.

In paragraphs 1 and 2 of the action, the Office rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by United States Patent 6,220,230 to Kawamura et al. (hereinafter "Kawamura").

The view was expressed that Kawamura discloses all elements of claim 1. Reference was made to column 5, lines 13 to 17, column 5, lines 29 to 32, columns 4 to 6 and FIGS. 1 to 4 of Kawamura. The Office also appeared to indicate that it considers the term "adjusts" synonymous with "varies" (see parenthetical expression on page 2 of the Office Action, fifth line from the bottom).

The Office also noted that the control (24) of the pressure source (4) through the manipulation of the solenoid valves (28, 18 and 30) to establish vacuum pressure, inherently and necessarily controls the mass flow rate of the air-fuel vapor mixture.

FIG. 4 of Kawamura shows that starting at time t_0 , an underpressure is generated, which reaches, at time t_1 , a pre-given final value, namely -500 mmHg (column 6, line 18). After waiting until time t_2 , a bypass valve 14 is opened, allowing the pressure in the fuel tank to build during the time interval from t_2 to t_4 . After delay time T_d has elapsed at time t_3 , the time T_m ("measurement time") is determined until a pre-given final

pressure P2 is achieved at time t4. This allows for the determination of the pressure variation speed Vp in view of the known pressure differential "P2 minus P1" and the known time Tm (see also column 5, lines 48 to 51).

The present invention requires:

"controlling said gas mass flow in order to obtain a constant overpressure or underpressure; and,

when a gas mass flow, which is constant in average, adjusts, drawing a conclusion as to the presence of a leakage when said gas mass flow is greater than a pre-given limit value." (emphasis added)

Thus, according to the present invention, the gas mass flow is first controlled to obtain a constant overpressure or underpressure. In the event that a gas mass flow, which is constant in average, adjusts subsequently, then this gas mass flow is compared to a pre-given limit value. Thus, any conclusion regarding leakage is drawn during a constant overpressure or underpressure. In contrast, Kawamura relies on a pressure differential, in particular, P2 minus P1 and a measurement time (Tm). Such a pressure differential does not form part of the present invention. In fact, such a pressure differential is not desirable, and consequently is not analyzed in the context of the invention of applicants' claim 1. In this context, applicants also note that the term "adjusts" is defined by Webster's New Collegiate Dictionary (G. & C. Merriam Co., Springfield, MA, 1981) under (1a) as "to bring to a more satisfactory state: (1): settle, resolve (2): rectify."

Furthermore, in the context of the present invention, the

measurement time is not instrumental in the determination of leakage (see Kawamura's column 6, lines 38 to 48). Rather, it is only important that enough time elapses for the gas mass flow to be constant in average, so that an appropriate conclusion can be drawn from it. Only a gas mass flow which is constant in average is evaluated.

With regard to the Office's note regarding inherency, applicants respectfully submit that the reference numbers recited in the Office Action could not be found in Kawamura and do not seem to relate to any inherent characteristic of Kawamura. Applicants submit that these reference numbers might have been derived, at least in part, from United States Patent 5,460,143 to Narita. Applicants submit that Narita relies, similarly to Kawamura, on a pressure differential in the diagnosis of leakage and does not draw a conclusion from a gas mass flow, which is constant in average in accordance with the applicants' invention as set forth in claim 1.

Applicants have shown that Kawamura does not disclose all limitations of claim 1 as required for an anticipation rejection. Accordingly, claim 1 should now be in condition for allowance.

In paragraph 3 of the action, the Office objected to claims 2 to 8 as being dependent upon a rejected base claim, but noted that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, applicants have appropriately amended these claims. Accordingly claims 2 to 8 should now be in condition for allowance.

Applicants appreciatively note that allowance of claims 9 to 14 in paragraph 4 of the action.

Reconsideration of the application is respectfully requested.

Respectfully submitted,



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